Bone Strength

Infant formula containing INFAT® provides the developing baby with proper nourishment for healthy growth.
Nutrition affects bone development

Bones form the framework for a child’s growing body. They are living tissue that changes constantly, with old bone being replaced by new bone.

Because it is widely believed that osteoporosis originates in childhood, researchers have made significant efforts to determine the factors that influence bone mineral buildup in healthy children. They found that the absorption of nutrients, such as minerals, fats, carbohydrates, and proteins, is tremendously important for normal infant growth and development and may contribute to early bone mineral buildup. This means that providing optimal nutrition during childhood may be essential to reaching the highest possible peak bone mass.

INFAT® mimics the special fat structure in human milk

Human milk is the optimal choice for infants, but when breastfeeding is not practical, the closest substitute is important for an infant’s comfort, health and development.

In human breast milk and in most infant formulas, the fat, primarily triglycerides, provides about 50% of the calories that are needed for healthy growth. Triglycerides in human milk are special as the fatty acids are bonded in a unique order which cannot be found in other types of oils. One major fatty acid in human milk, named palmitic acid, is mainly (70-75% of it) located at the sn-2 position. This typical structure called sn-2 palmitate, is responsible for some of the superiority of human milk.

This special component of the human milk fat has many benefits compared to the vegetable oils that are commonly used in infant formulas. This difference has a major impact on how well calcium and other nutrients are absorbed.

INFAT® benefits bone strength parameters

Studies show that INFAT®-containing infant formulas supports the absorption of calcium and fat and strong and healthy bones.

A clinical study carried out to compare the benefits of infant formula containing INFAT® with a standard formula tested the formulas’ effects on infant’s bone strength. It was demonstrated that term newborns fed with INFAT® formula containing INFAT® for 12 weeks had a significantly higher bone speed of sound (SOS)* than that of newborns fed with standard infant formula. The bone SOS was comparable to that of breastfed term newborns.

Speed of sound (SOS)*

A very popular parameter for measuring bone strength in infants is called Speed of Sound (SOS). SOS, a non-invasive method, reflects mineral density, cortical thickness, elasticity and micro-architecture of the bone. Thus, it provides a more complete picture of bone strength compared to other known measurements of bone strength.

INFAT® Benefits Bone Strength Parameters

![Graph showing Speed of Sound (SOS) comparison](image)

Significance was calculated by ANCOVA controlled for birth weight

Litmanovitz, I. et al., High Beta-palmitate formula and bone strength in term infants: a randomized, double-blind, controlled trial., Calcif Tissue Int. 2013 Jan;92(1):35-41.

Healthy Growth

Infant formula containing INFAT® provides the developing baby with proper nourishment for healthy growth.